

The FRPA Evaluator

Extension Note #10
May 2005

2004/2005 Year in Review

2004/05 Goals and Objectives

Building on the success of the first year of the FRPA Resource Evaluation Program (FREP), which focused on establishing the provincial resource evaluation framework, 2004/05 saw FREP expand and refine a number of key program initiatives.

A significant amount of effort was put into the continued development of indicators and monitoring protocols for riparian/fish, soils, stand-level biodiversity, water quality, range, recreation, timber, visual quality, karst resource features, wildlife and cultural heritage resources. Another major project involved pilot testing the resource stewardship monitoring protocols for riparian/fish, soils and stand-level biodiversity in eight forest districts across the province. A quality assurance framework for FREP was initiated to help ensure the integrity and quality of all monitoring and evaluation activities, including data collection, management and reporting processes.

A total of six effectiveness evaluations were conducted in 2004/05. Final reports for two of the evaluations are posted on the FREP website. The remaining four reports will be posted as soon as they have been finalized.

Communication with program stakeholders was enhanced in 2004/05 through the development and distribution of eight FRPA Evaluator newsletters. Stakeholder communication was also maintained through further development and updating of the FREP website. An extensive amount of information is available on the website to keep stakeholders well informed of ongoing FREP initiatives.

Accomplishments in 2004/05

Indicator and Monitoring Protocol Development

Throughout much of 2004/05, work continued on the refinement of indicators and monitoring protocols for riparian/fish, soils and stand-level biodiversity resource values (see: www.for.gov.bc.ca/hfp/frep/3_indicators.html). During the 2004 field season, these three monitoring protocols were field tested, revised and pilot tested in eight forest districts.

A number of other resource value indicators and monitoring protocols were either initiated or completed, including soils (landscape-terrain stability), riparian (extensive level), landscape-level biodiversity, water quality, range, recreation, timber, visual quality, karst resource features, wildlife (gopher snake, tailed frog), and cultural heritage resources. Preliminary field testing was conducted on the water quality and karst indicators and protocols.

The FRPA Evaluator is a regular publication of the FRPA Resource Evaluation Program designed to inform stakeholders on program development and implementation, and report on the results of evaluation projects.

The objective of the FRPA Resource Evaluation Program is to determine if forest and range policies and practices in British Columbia are achieving government's objectives for the resource values identified in FRPA, with a priority on environmental outcomes and consideration for social and economic parameters, where appropriate.

Initial field testing of the use of electronic handheld data loggers versus field cards was conducted in the Chilliwack Forest District using IPAQ HP4150 handheld PCs, Bluetooth wireless GPS, and electronic checklists developed for riparian/fish and stand-level biodiversity resource values. Difficulties with the operating software caused the handheld PCs to lock up during the field testing. This issue and others will be addressed in future efficacy testing of handheld devices.

Resource Stewardship Monitoring Pilots

In the fall of 2004, resource stewardship monitoring (RSM) pilot tests were conducted in eight forest districts across the province for three resource value checklists – riparian/fish, soils and stand-level biodiversity. The purpose of the pilots was to further test/refine the indicators and monitoring protocols for the three resource values; assess quality control mechanisms, site selection criteria and training standards; and improve the overall effectiveness of the RSM program. Prior to going in the field, district field staff were trained on how to use the checklists under operational monitoring conditions.

The results of the pilot testing were presented and discussed at a two-day workshop held in Victoria on February 22–23, 2005. Participants included representatives from districts, regions, headquarters branches and the Forest Practices Board. Outcomes and recommendations from the workshop will be instrumental in fine-tuning subsequent RSM pilots and are presented in FREP Extension Note #9 – Resource Stewardship Monitoring Pilot Testing Results (see: www.for.gov.bc.ca/hfp/frep/repository/FRPA_Evaluator-n09.pdf.)

With minor revisions and refinements, the riparian/fish and stand-level biodiversity checklists will be ready for operational implementation in the 2005 field season. Due to a late start in the 2004 field season, the soils protocol was only able to be pilot tested on a few sites. As a result, the soils checklist will continue to be piloted in 2005. The water quality and karst checklists will also be pilot tested this field season.

Quality Assurance Framework

A quality assurance framework for FREP was initiated in 2004/05. A detailed literature review was conducted to summarize current quality management practices used in various jurisdictions around the world. Based on the information from the literature review, conceptual models were used to develop a preliminary quality assurance framework for FREP covering all aspects of the program, including indicator and protocol development, training, field data collection, data analysis, and extension and reporting. In 2005/06, the next step will be to complete the quality assurance framework and develop several key quality assurance protocols.

Data Management

A draft Business Requirements Report was prepared in 2004/05 to consider and assess client needs for a data management and reporting system for FREP. This system will need to provide the ability to capture and manage data from both intensive resource evaluations as well as resource stewardship monitoring. The Business Requirements Report will be further refined and completed in 2005/06. Development of a data management and reporting system will also be initiated in 2005/06.

Effectiveness Evaluation Training

A one-day effectiveness evaluation training course was developed in 2004/05 titled, *Effectiveness Evaluations – A Primer for Making Them Truly Effective*. Two sessions were delivered to MOF and MWLAP field staff in Nanaimo and Penticton. The purpose of the course is to ensure staff are asking the right evaluation question(s) in order to develop the indicators required to provide the information needed to make informed decisions. The course will be offered in all three forest regions in 2005/06.

Program Development Initiatives

In the spring of 2005, to help provide a broad overview of how FREP is structured and how all the various program components fit together, the FRPA Resource Evaluation Working Group (FREWG) initiated a draft report titled, *FRPA Resource Evaluation Program (FREP) Monitoring and Evaluation Strategy*. This document will describe all aspects of FREP (e.g., program charter, effectiveness evaluations, resource stewardship monitoring, indicator development and monitoring protocols, evaluation reports, stakeholder communication, etc.) and place them within the context of an overall program strategy. The final report is expected to be completed in May 2005.

A similar process was conducted for the Resource Stewardship Monitoring (RSM) Program to describe the strategy for implementing the RSM component of FREP. This draft report is titled, *FRPA Resource Stewardship Monitoring Framework*, and is also expected to be completed in May 2005.

Evaluation Question Updates

In 2003/04, 34 priority questions were identified for the 11 resource values identified under FRPA. These questions were based on the highest priority issues related to each resource value. In 2004/05, these priority questions were updated, and the seven highest priority questions became the focus of intensive evaluations. The priority evaluation questions can be viewed at: www.for.gov.bc.ca/hfp/frep/4_frep_pe_questions.html.

Effectiveness Evaluations

Six effectiveness evaluation projects were undertaken in 2004/05. Two final reports have been posted on the FREP website at: www.for.gov.bc.ca/hfp/frep/6_evaluation_reports.html.

It is anticipated that the other four reports will be completed and posted by the summer of 2005.

Range Effectiveness Evaluations

Part 1. An Evaluation of Range Use Plan Content in Four Forest Districts in British Columbia

Part 2. An Evaluation of Rangeland Health and the Effectiveness of Plant Residue in Protecting Resource Values

A two-phase range evaluation project was completed in 2004. The first phase evaluated the content of Range Use Plans approved after December 31, 2000 (Code streamlined plans). Range Use Plans were evaluated in four forest districts – Peace, Nadina, 100 Mile House, and Okanagan-Shuswap. A total of 419 plans were assessed to determine if they met legal content requirements.

The second phase of the evaluation assessed rangeland health at 86 sites in the same four districts. Indicators such as site functionality, average stubble height, level of browse use, form class of shrub species, visual obscuration, plant community seral stage, and the presence of invasive plants were used in the evaluation.

Recreation Effectiveness Evaluation

To determine if Forest Service recreation sites are being managed in a safe, sanitary and environmentally sound manner, an evaluation of 120 randomly selected sites across the province was carried out during the 2005 field season. Individual campsites were evaluated for the state of on-site roads, off-road erosion, waste management, safety concerns, forest health issues, trails and facilities, and overall site design. The results of the evaluation will be used to:

- Assess the effectiveness of current recreation site management practices;
- Identify differences in the state of recreation sites in different forest regions and districts, and between different types of sites (managed with fees, managed without fees, and user maintained); and
- Adjust the ministry formula for allocating recreation funds to forest regions, if required.

Timber Resource Value Evaluation

The objective of the timber resource value evaluation project was to establish benchmarks for practices, policies, standards and legislation, and their effect on tree species diversity and genetic diversity prior to and during the time the Forest Practices Code was in effect. These benchmarks will be used to measure how practices, policies, standards and legislation under FRPA impact tree species and genetic diversity.

The genetic diversity component of the evaluation was completed in 2004/05, and documents the status of the deployment of Class A and B seed in the province since genetically improved seed became available. The tree species diversity component will be completed in the spring and summer of 2005/06. This part of the project will document the status of tree species diversity before and after harvest to see if tree species diversity is being maintained in the province.

Baseline Datasets for Evaluating Wildlife Tree Patches

This project compiled datasets on tree and snag densities in unmanaged CWH, ESSF and ICH forests to provide baseline comparisons for wildlife tree patch data collected during effectiveness evaluations. The goal of the project was to answer the following evaluation question: "How much do levels of various structures retained in wildlife tree patches differ from unmanaged stands?"

Comparing available baseline information with data collected during effectiveness monitoring/evaluations is an effective method for determining if the full range of natural variation is being maintained within wildlife tree retention areas in managed stands. Ideally, the best baseline data would be derived from pre- and post-harvest data collected from the same site; however, this type of information is rarely available, and comparative baseline data is often the only option. This report is posted on the FREP website at: http://www.for.gov.bc.ca/hfp/frep/6_evaluation_reports.html.

Preliminary Assessment of the Effectiveness of Wildlife Tree Retention on Cutblocks Harvested Between 1999 and 2001 under the Forest Practices Code

This project assessed the biological effectiveness of British Columbia's wildlife tree policies and practices in protecting habitat for wildlife-tree-dependent species. It was the second phase of an earlier study that focussed on assessing the implementation of wildlife tree retention policy in British Columbia (see *Evaluation of Wildlife Tree Retention for Cutblocks Harvested Between 1996–2001 Under the Forest Practices Code* at: www.for.gov.bc.ca/hfp/frep/6_evaluation_reports.html).

The study provided a number of recommendations for improving the biological effectiveness of provincial wildlife tree retention strategies. This report is posted on the FREP website at: www.for.gov.bc.ca/hfp/frep/6_evaluation_reports.html.

Evaluation of Cutblock Sizes Harvested under the Forest Practices Code in British Columbia 1996–2002

This evaluation project was conducted to answer the following questions:

1. What was the range and average size of cutblocks harvested under the Forest Practices Code from January 1, 1996 to December 31, 2002?
2. What were the trends in use for clearcutting versus partial cutting silvicultural systems from 1996–2002?
3. What impact did the 40/60 rule have on cutblock size and distribution from 1996–2002?
4. Did cutblocks larger than the maximum size specified by the 40/60 rule emulate regional natural disturbance patterns?

To address these questions, historical data from the Ministry of Forests' Reporting Silviculture Updates and Landstatus Tracking System (RESULTS) were analyzed for nearly 43,000 cutblocks harvested in British Columbia from 1996–2002. In addition to analyzing the RESULTS data, a survey was circulated to all 29 forest districts and major licensees to collect empirical information on cutblock size, trends in silvicultural systems, and the effectiveness of the 40/60 rule.

The study provided a number of recommendations regarding the 40/60 rule, cutblock size and natural disturbance patterns, and the use of partial cutting systems.

Stakeholder Communication

Eight FRPA Evaluator newsletters were produced in 2004/05.

FRP Technical Notes:

- Technical Note #2 – FRPA Resource Evaluation Program Terminology.
www.for.gov.bc.ca/hfp/frep/repository/FRPA_Evaluator-Tech-n02.pdf
- Technical Note #3 – Why the Units We Evaluate Should Be Randomly Selected.
www.for.gov.bc.ca/hfp/frep/repository/FRPA_Evaluator-Tech-n03.pdf

FRP Extension Notes:

- Extension Note #4 – Resource Stewardship Monitoring Pilot Project 2004–2005.
www.for.gov.bc.ca/hfp/frep/repository/FRPA_Evaluator-n04.pdf
- Extension Note #5 – Forest Certification and the FRPA Resource Evaluation Program.
www.for.gov.bc.ca/hfp/frep/repository/FRPA_Evaluator-n05.pdf
- Extension Note #6 – Summary of FREP Report #1: Baseline Datasets for Evaluating Wildlife Tree Patches.
www.for.gov.bc.ca/hfp/frep/repository/FREP_Evaluator-n06.pdf
- Extension Note #7 – FREP Report #2: Preliminary Assessment of the Effectiveness of Wildlife Tree Retention on Cutblocks Harvested Between 1999 and 2001 under the Forest Practices Code.
www.for.gov.bc.ca/hfp/frep/repository/FREP_Evaluator-n07.pdf
- Extension Note #8 – FREP Report #3: Evaluation of Cutblock Sizes Harvested under the Forest Practices Code in British Columbia 1996–2002. www.for.gov.bc.ca/hfp/frep/repository/FREP_Evaluator-n08.pdf
- Extension Note #9 – Resource Stewardship Monitoring Pilot Results.
www.for.gov.bc.ca/hfp/frep/repository/FRPA_Evaluator-n09.pdf

Current Status of Resource Value Indicators

Resource Value	Specific Checklist/Indicators	Primary Contact/Lead(s)	Status
Biodiversity	Stand-level	Nancy Densmore (MOF) Richard Thompson (MWLAP)	Piloted in 2004. Will be ready for implementation in 2005.
	Landscape-level	Nancy Densmore (MOF) Richard Thompson (MWLAP)	In development, not field tested.
Cultural Heritage Resources		Diane Goode (MOF)	Guidelines for managing cedar for cultural purposes.
Fish/Riparian	Cutblock (routine)	Peter Tschaplinski (MOF)	Piloted in 2004. Will be ready for implementation in 2005.
	Cutblock (extensive)	Peter Tschaplinski (MOF)	In development, not field tested.
Range	Riparian condition (lakes and wetlands)	Doug Fraser (MOF)	In use.
	Riparian condition (streams)	Doug Fraser (MOF)	In use.
	Upland condition	Doug Fraser (MOF)	In use.
Recreation	Sites	Bill Marshall (MOF)	Implemented in 2004.
	Trails	Bill Marshall (MOF)	No work to date.
	User satisfaction	Bill Marshall (MOF)	No work to date.
Resource Features	Karst	Peter Bradford (MOF)	Draft, preliminary field testing completed.
	Remaining resource features	Ian Miller (MOF)	No work to date.
Soils	Cutblock	Shannon Berch (MOF)	Partially piloted in 2004. Will be re-piloted in 2005.
	Terrain stability	Mike Curran (MOF)	In development.
Timber	Cutblock size	Sandy Currie (MOF)	Used to produce 2004 report.
	Tree species/genetic diversity	Frank Barber (MOF)	In use 2004.
	Forest health/free growing	Frank Barber (MOF)	No work to date.
Visual Quality	Evaluation of VQM	Jacques Marc (MOF)	Drafted in 2004. Field tested by the Forest Practices Board.
Water	Quality – cutblock	Dave Maloney (MOF) Les Swain (MWLAP) Steve Chatwin (FPB)	In development, preliminary field testing completed.
	Overall watershed assessment		No work to date.
Wildlife	Gopher snake	Wayne Erickson (MOF) Kathy Paige (MWLAP)	In development, not field tested.
	Tailed frog	Wayne Erickson (MOF) Kathy Paige (MWLAP)	In development, not field tested.
	Marbled murrelet	Wayne Erickson (MOF) Kathy Paige (MWLAP)	In development, not field tested.
	Badger	Wayne Erickson (MOF) Kathy Paige (MWLAP)	Preliminary work, not field tested.
	Mountain goat	Wayne Erickson (MOF) Kathy Paige (MWLAP)	Preliminary work, not field tested.
	Ungulate winter range	Wayne Erickson (MOF) Kathy Paige (MWLAP)	Preliminary work, not field tested.
	White-headed woodpecker	Wayne Erickson (MOF) Kathy Paige (MWLAP)	Preliminary work, not field tested.
	Other species at risk		No work to date.

Acknowledgements

The FREP Working Group would like to thank many agencies and staff in their considerable efforts to make 2004/05 a very productive year for the provincial evaluation program. Through strong funding support and the efforts of many dedicated professionals, FREP was able to move forward on a significant number of important projects and initiatives. Thanks are extended to:

- Ministry of Forests (Field Services Division, Research Branch and Forest Practices Branch);
- Ministry of Water, Land and Air Protection (Biodiversity Branch);
- Ministry of Sustainable Resource Management;
- Forest Practices Board; and
- University of British Columbia.

Expenditures for 2004/05

The following table is an approximate breakdown of FREP expenditures for 2004/05. The funding came from a variety of sources.

Project	\$ Expenditure
Evaluation program management (travel, website development, consultant expertise, extension, quality assurance, etc.)	\$65,000
Data system review (IMG)	\$25,000
Investigation and training related to electronic data collection devices (riparian, soils, stand-level biodiversity)	\$40,000
Indicator checklist and protocol development (soils, water quality, riparian, range, biodiversity, wildlife, visual quality and karst)	\$140,000
Range evaluation – forage	\$15,000
Timber evaluation – tree species and genetic diversity	\$20,000
Resource stewardship monitoring pilot training development and delivery, field work, travel, post-pilot evaluation and workshop, and documentation of lessons learned	\$55,000
Total	\$360,000

2004/05 FREP-Related Forest Practices Board Activities

In 2004/05, the Forest Practices Board was involved in several key FREP initiatives. The Board provided funding and technical expertise to the development and refinement of riparian/fish, water quality, soils (cutblock and terrain-levels), karst and biodiversity (landscape and stand-level) indicators and monitoring protocols. In addition, the Board conducted a visual management audit and a second riparian audit using an updated version of the indicators. The Board officially reported on soils and riparian audits conducted in 2003/04.

FREP Initiatives for 2005/06

FREP has many key initiatives planned for 2005/06. Indicator and monitoring protocol development/refinement will continue for several resource values. Monitoring protocols for two or three high priority resource values will be pilot tested. The riparian and stand-level biodiversity checklists will be operationally implemented in a limited number of forest districts. A minimum of two intensive effectiveness evaluations will be completed. Ongoing program development will proceed in a number of important areas. For a complete list of the priority initiatives planned for 2005/06, visit the FREP website at: <http://www.for.gov.bc.ca/hfp/frep>.

More Information

For additional information on FREP, please refer to our website at: <http://www.for.gov.bc.ca/hfp/frep>, or contact any member of the FRPA Resource Evaluation Working Group:

Barber, Frank	MOF – Forest Practices Branch	Frank.Barber@gems6.gov.bc.ca	(250) 387 8910
Bradford, Peter	MOF – Forest Practices Branch	Peter.Bradford@gems1.gov.bc.ca	(250) 356 2134
Collins, Denis	MOF – Coast Forest Region	Denis.Collins@gems4.gov.bc.ca	(250) 751 7121
Davis, Sam	MOF – Mackenzie Forest District	Sam.Davis@gems6.gov.bc.ca	(250) 997 2215
Dunkley, Jim	MOF – Coast Forest Region	Jim.Dunkley@gems6.gov.bc.ca	(250) 751 7352
Haley, Dave	MOF – Timber Tenures Branch	Dave.Haley@gems2.gov.bc.ca	(250) 387 8317
Hoyles, Susan	MOF – Northern Interior Forest Region	Susan.Hoyles@gems7.gov.bc.ca	(250) 565 6214
Jones, Greg	MWLAP – Biodiversity Branch	Greg.Jones@gems3.gov.bc.ca	(250) 356 8186
Mackinnon, Andy	MSRM – Res. Management Division	Andy.Mackinnon@gems1.gov.bc.ca	(250) 953 4792
Mah, Shirley	MOF – Research Branch	Shirley.Mah@gems8.gov.bc.ca	(250) 356 2180
Martin, Wayne	MOF – Northern Interior Forest Region	Wayne.Martin@gems9.gov.bc.ca	(250) 565 6102
Nyberg, Brian	MOF – Forest Practices Branch	Brian.Nyberg@gems6.gov.bc.ca	(250) 387 3144
Peterson, Dan	MOF – Southern Interior Forest Region	Dan.Peterson@gems7.gov.bc.ca	(250) 828 4187
Porcheron, Ross	MSRM – Interagency Management Committee	Ross.Porcheron@gems9.gov.bc.ca	(250) 371 6232
Reveley, Hal	MOF – Coast Forest Region	Hal.Reveley@gems4.gov.bc.ca	(250) 751 7097
Soneff, Ken	MOF – Southern Interior Forest Region	Ken.Soneff@gems7.gov.bc.ca	(250) 828 4164
Still, Gerry	MOF – Research Branch	Gerry.Still@gems1.gov.bc.ca	(250) 387 6579
Thompson, Richard	MWLAP – Biodiversity Branch	Richard.Thompson@gems2.gov.bc.ca	(250) 356 5467
Weese, Kristine	MOF – Forest Practices Branch	Kristine.Weese@gems3.gov.bc.ca	(250) 558 1760
Wilford, Dave	MOF – Northern Interior Forest Region	Dave.Wilford@gems3.gov.bc.ca	(250) 847 6392



**BRITISH
COLUMBIA**

Ministry of Forests
Ministry of Water, Land and Air Protection
Ministry of Sustainable Resource Management